

Abstract

Calibration Procedure for Wireless Networks with Direct Mode Traffic

A calibration procedure of wireless networks to create a topology map mainly consists of two phases: a measurement phase during which each wireless device, i. e. all mobile terminals and the central controller, transmits a calibration signal in broadcast mode (S2, S3, S4) and each other wireless device measures the received signal quality and the reporting phase during which each mobile terminal reports the measured results to the central controller of the network (S6, S7). Both of these phases are preferably initiated by the central controller, the measurement phase with the broadcast of a measurement control signal to all mobile terminals (S1) and the reporting phase with the broadcast of a reporting control signal to all mobile terminals (S5). Based on all measurement results the central controller creates a topology map of the network once all reports have been received. This topology map is updated in two cases, namely when a new device joins the network with a high priority calibration and when a timer expires with a low priority calibration, i. e. only when there are enough free resources.

(Fig. 2)